

**RECEIVED
CENTRAL FAX CENTER**

DEC 22 2006

**PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Powell et al.	:	Confirmation No. 9296
	:	
Serial No.: 09/963,720	:	Art Unit: 2833
	:	
Filed: September 26, 2001	:	Examiner: Leon, Edwin A.
	:	
For: ULTRASONIC WELDED CONNECTOR STICK	:	

Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, fax number 571-273-8300, on December 22, 2006.


Robert J. Kapalka

APPEAL BRIEF

This brief is in furtherance of the Notice of Appeal filed in this case on October 30, 2006.

Please charge the requisite fee of \$500.00 for filing this brief to Deposit Account No. 23-1950.

App. No. 09/963,720
Docket No. 17674

1

Real Party in Interest

The real party in interest is Tyco Electronics Corporation, 2901 Fulling Mill Road, Middletown, Pennsylvania, 17057, which is the owner of this application by assignment recorded in the U.S. Patent and Trademark Office at Reel 012276, Frame 0676.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of the Claims

Claims 1-14, 16, 17, 25, 27-29, 35 and 40 have been canceled.

Claims 15, 18-24, 26, 30-34, 36-39, 41 and 42 remain in the application, stand rejected, and are on appeal.

Status of Amendments

There are no amendments after final rejection.

Summary of Claimed Subject Matter

The invention defined in independent claims 15, 26, 34 and 42 is variously termed in the preamble of each claim as a connector device, a connector stick device, a connector assembly, and a stick of electrical connectors. Regardless of the particular terminology, the invention is shown generally in Fig. 8 as a connector stick 348 comprising multiple electrical connectors 310 (specification at page 6, lines 24-26). Various embodiments of the connectors 310 are shown in Figs. 1-7 as connectors 10, 100 and 200. With reference to both the connector 100 shown in Figs. 4-5 and the connector 200 shown in Figs. 6-7, each of the connectors 100, 200 includes a housing 112, 212 having opposing sides 122, 124; 222, 224 (specification at page 5, lines 14-18 and page 6, lines 5-10). A conductive connecting device 142, 242 is mounted in the housing (specification at page 5, line 27 to page 6, line 4, and page 6, lines 17-23). Each connector has at least one opening 128A, 128B, 228 through which an electrical cable can extend and be connected with the conductive connecting device (specification at page 5, lines 18-26 and page 6, lines 10-26). Referring back to Fig. 8, at least one of the opposing sides of each connector 310 is removably connected to one of the opposing sides of an adjacent connector 310 by an

ultrasonic weld 350 (specification at page 6, lines 26-28), whereby each one of the connectors is separable from its adjacent connectors by breaking the ultrasonic welds to form an individual connector unit (specification at page 7, lines 8-12).

The invention defined in independent claims 39 and 41 is a method for splicing cable to a plurality of connectors. The method comprises steps of providing a plurality of individual connectors each including a housing 12, 112, 212, a cable opening 28, 128A, 128B, 228 in the housing, and a conductive crimping device 140, 240 in the housing; bonding the connectors to one another with respective ultrasonic welds 350 to form a connector stick 348, inserting cable into the cable opening of each joined connector, securing the cable to each of the connectors using the conductive crimping device, and breaking the respective ultrasonic welds to form a plurality of individual connector units each having a cable spliced thereto (specification at page 5, line 3 to page 7, line 12).

Grounds of Rejection to be Reviewed on Appeal

Applicants request the Board to review the rejection of claims 15, 18-24, 26, 30-34, 36-39, 41 and 42 under 35 U.S.C. 103(a) as being unpatentable over Czaja (US 4,717,360) in view of Bunn et al. (US 6,383,320).

Argument

Claims 15, 18-24, 26, 30-34, 36-39, 41 and 42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Czaja (US 4,717,360) in view of Bunn et al. (US 6,383,320).

The claims relate to a connector stick device comprising a plurality of electrical connectors, and to a method for splicing cable to a plurality of electrical connectors. All of the claims include limitations wherein adjacent connectors are joined to each other by respective ultrasonic welds, and wherein the joined connectors are separable from each other by breaking the ultrasonic welds.

Czaja discloses a modular connector assembly that is molded as a unitary structure (column 2, lines 65-66). The molded unitary connector assembly has break-away walls that permit portions of the assembly to be separated from the main structure, thereby forming connector modules (column 3, lines 21-29). Czaja does not disclose or suggest any joining together of individual connector modules, and does not disclose the use of ultrasonic weld.

The Examiner points to Bunn et al. for disclosing the use of ultrasonic weld to join parts of an assembly, and from this disclosure the Examiner concludes that it would have been obvious to modify the connector assembly of Czaja by using ultrasonic weld to attach the connector modules provisionally.

Applicants respectfully disagree. Firstly, Czaja does not disclose or suggest any joining together of individual connector modules. Czaja discloses a modular connector assembly that is molded as a unitary structure. The molded unitary connector assembly has break-away walls that permit portions of the assembly to be separated from the main structure, thereby forming individual connector modules. Thus, Czaja discloses detachment of individual connector modules from a molded connector assembly, but Czaja does not describe or suggest any joining together of individual connector modules. Therefore, it would not have been obvious to modify Czaja by using ultrasonic weld, because there would be no need to do so. Czaja is not interested in joining connectors together. Instead, Czaja originally forms the connectors molded together in a joined state. To substitute ultrasonic welds for a unitary molded assembly would add nothing other than time and expense to the manufacturing process. Therefore, there would be no reason to modify the connector assembly of Czaja by using ultrasonic weld, and the references provide no suggestion or motivation to do so.

Secondly, the Examiner's reliance on Bunn et al. is misplaced as being directed to non-analogous art. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." M.P.E.P. §2141.01(a) citing *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). "A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." M.P.E.P. §2141.01(a) citing *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992).

Bunn et al. discloses cell culture, immunological and molecular tools such as slides, wells, vessels and the like for use in research or diagnostic testing of biological test samples (column 1, lines 14-20). Bunn et al. is in no way concerned with electrical connectors, and therefore it is not in the field of applicant's endeavor.

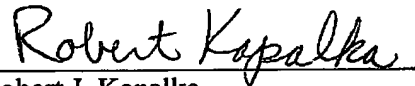
Further, Bunn et al. is not reasonably pertinent to the particular problem with which the applicant was concerned. As stated in applicant's disclosure at page 2, lines 16-18, applicant was concerned with providing connectors that are joined in a removable or breakable manner. Bunn et al. is concerned with providing tools that are particularly suited for multiple activities associated with cell culturing and testing of biological test samples. In this regard, Bunn et al. discloses an ultrasonic welding process that removably bonds a plurality of wells (42) to a slide plate (32). However, the matter with which Bunn et al. deals, i.e., tools for biological test samples, is so far removed from applicant's field of concern as to make it illogical for applicant's attention to have been drawn to this reference.

For these reasons, applicants submit that the invention defined in the pending claims is not known or made obvious by the cited prior art.

The Board is respectfully requested to reverse the rejection of the claims and to indicate allowability thereof.

Respectfully submitted,

James A. Powell, et al.
Applicants



Robert J. Kapalka
Registration No. 34198
Tyco Electronics Corporation
Suite 140
4550 New Linden Hill Road
Wilmington, DE 19808
Phone: (302) 633-2771

Claims Appendix

1-14. (Canceled).

15. A connector device comprising:

a first connector including a housing having opposing sides and a conductive connecting device mounted in the housing; and

a second connector including a housing having opposing sides and a conductive connecting device mounted in the housing;

at least one of said opposing sides of said first connector being removably connected to one of said opposing sides of said second connector by an ultrasonic weld, whereby said first connector is separable from said second connector by breaking said ultrasonic weld such that said first connector forms an individual connector unit.

16-17. (Canceled)

18. The connector device of Claim 15, wherein said housings are formed of a nonconductive material.

19. The connector device of Claim 18, wherein said housings are formed of a polycarbonate material.

20. The connector device of Claim 18, wherein said housings are formed of a polyester material.

21. The connector device of Claim 15, wherein said housings are formed of a polypropylene material.

22. The connector device of Claim 15, where said first connector housing is formed of one nonconductive material and said second connector housing is formed of a second nonconductive material.

23. The connector device of Claim 15, wherein said conductive connecting device in each of said housings is a crimping device adjacent to a channel defined in each of said housings.

24. The connector device of Claim 23, wherein said first and second connectors further include a crimping portion capable of engaging said crimping device.

25. (Canceled)

26. A connector stick device comprising:
a plurality of connectors;
each of said connectors including a conductive connecting device mounted in a housing having opposing sides; and

wherein at least one of said opposing sides of each said connector is removably connected to one of said opposing sides of an adjacent said connector by an ultrasonic weld, and further wherein each said connector is separable from its adjacent said connector by breaking said ultrasonic weld to form an individual connector unit.

27-29. (Canceled)

30. A connector stick device in accordance with claim 26 wherein said housings comprise first and second portions movable relative to one another.

31. A connector stick device in accordance with claim 26 wherein each said conductive connecting device comprises a crimping device.

32. A connector stick device in accordance with claim 26 wherein said housings each comprise a channel for receiving cabling, and a crimping device proximate said channel.

33. A connector stick device in accordance with claim 26 wherein said opposing sides are nonconductive.

34. A connector assembly for splicing cable with an automatic crimping tool, said connector assembly comprising:

a plurality of nonconductive housings joined to one another by respective ultrasonic welds to form a connector stick, each of said housings holding a conductive connecting device

and having at least one opening for passage of electrical cabling to the conductive connecting device, wherein said plurality of joined nonconductive housings are separable from one another by breaking said respective ultrasonic welds as the cable is spliced to successive said conductive connecting devices along the connector stick, thereby forming a plurality of individual connector units.

35. (Canceled)

36. A connector stick assembly in accordance with claim 34 wherein said housings comprise first and second portions movable relative to one another.

37. A connector stick assembly in accordance with claim 36 wherein each said conductive connecting device comprises a crimping device.

38. A connector stick assembly in accordance with claim 34 wherein said housings each comprise a channel for receiving cabling, and a crimping device proximate said channel.

39. A method for splicing cable to a plurality of connectors, said method comprising:
providing a plurality of individual connectors, each said connector including a housing, at least one cable opening, and at least one conductive crimping device proximate the opening;
joining the connectors to one another by respective ultrasonic welds to form a connector stick for splicing operations;
inserting cable into the openings of each of the joined connectors; and

securing the cable to each of the connectors using the conductive crimping device, wherein force generated in securing the cable to the respective connectors separates the respective connectors from the connector stick by breaking the respective ultrasonic welds, thereby forming a plurality of individual connector units each having cable spliced thereto.

40. (Canceled)

41. A method for splicing cable to a plurality of connectors, said method comprising: providing a plurality of individual connectors, each said connector including a first housing portion and a second housing portion movable relative to one another, a cable opening in one of the first and second housing portions, and a conductive crimping device in the other of the first and second housing portions;

bonding the connectors to one another with respective ultrasonic welds to form a connector stick for splicing operations;

inserting cable into an opening of one of the joined connectors; and

breaking the ultrasonic weld between the one connector and an adjacent connector while securing the cable to the one connector using the conductive crimping device.

42. A stick of electrical connectors comprising:

a plurality of electrical connectors disposed side-by-side, each of said connectors including a conductive connecting device mounted in a non-conductive housing, said connectors being joined together by respective ultrasonic welds between adjacent said housings, wherein

said connectors are individually separable from the stick by breaking said ultrasonic welds to form individual connector units.

App. No. 09/963,720
Docket No. 17674

11

Evidence Appendix

None

App. No. 09/963,720
Docket No. 17674

12

Related Proceedings Appendix

None

App. No. 09/963,720
Docket No. 17674

13